REMARKS

The specification has been amended to delete the table of contents on page i.

Claim 71 has been amended to recite that the calculating module is able to resolve the at least two unit-specific markers of the extended object. Support for this amendment can be found throughout the specification, for example, on page 16, lines 4-8. Claim 90 has been similarly amended.

Claim 71 has also been amended to recite "the extended object," to provide proper antecedent basis. Claim 75 has also been similarly amended.

No new matter has been added. Claims 71-104 are now pending for examination.

Interview with Examiner

Applicants' representatives thank the Examiner for the courtesy of a telephone conference on February 25, 2004, in which the Eigen reference and the claim amendments presented below were discussed. Applicants presented arguments that the claimed invention distinguishes over the Eigen reference as described in more detail below.

Objection to the Specification

The Office Action objects to the table of contents before page 1.

Applicants have deleted the table of contents.

Claim Rejections - 35 U.S.C. §102(b)

Claims 71, 72, 75-79, 85-91 and 94-98 were rejected under 35 U.S.C. §102(b) as being anticipated by Eigen et al.

Applicant does not believe that Eigen discloses the detection of an "extended object" as required by each of the Applicant's pending claims. Eigen describes the analysis of particles using fluorescence correlation spectroscopy (FCS). In FCS, particle detection occurs through the detection of "a target entity that is diffusing through an illuminated cavity" (i.e., a spatial volume). See, for example, p. 5740, left column, third paragraph. Eigen further explains FCS as "a diffusion-controlled reaction of an individual fluorescent particle with an intensely

illuminated discrete space cell (light cavity) of 0.1-1 fl [femtoliters] in volume" (p. 5741, left column, third paragraph). Thus, Eigen describes the detection of objects that are able to freely diffuse through an illuminated cavity, i.e., objects having particle-like behavior, and thus, Eigen cannot be used for the linear analysis of extended objects.

Generally speaking, FCS systems of the type described by Eigen are used for size determination of particles in a sample. Specifically, particles in the sample are allowed to diffuse through an illuminated detection zone and their rate of diffusion through that zone (and time within the zone) are determined. Larger particles diffuse more slowly through the detection zone, whereas smaller particles diffuse more rapidly. In contrast, the claims of the present application each require that the particles being analyzed are "extended objects". These "extended objects" are created by subjecting sample particles to hydrodynamic forces which cause them to become elongated and to move in the direction of fluid flow. In order for a particle to remain in an extended state, (i.e., as an "extended object"), it must remain within a hydrodynamic flow stream, and not in a diffusing environment. As such, "extended objects" as required by each of the Applicant's pending claims cannot be present in the diffusing environment as required by the FCS systems of the type disclosed by Eigen. Put simply, an object can be either in a hydrodynamic stream in which it moves with fluid flow, or it is in a diffusing environment in which the surrounding liquid medium is relatively stationary and the object is caused to diffuse through that medium. Thus, FCS systems teach directly away from the claimed systems in which "extended objects" are required.

Furthermore, as discussed during the interview of February 25th, Eigen nowhere discloses or suggests the resolution of at least two unit-specific markers on an extended object, as recited in independent claims 71 and 90, as amended.

It is thus believed that independent claims 71 and 90 are allowable in view of Eigen, and it is therefore respectfully requested that the rejection of these claims be withdrawn. Claims 72, 75-79, 85-89, 91, and 94-98 depend, directly or indirectly, from independent claims 71 or 90, and it is respectfully requested that the rejection of these claims also be withdrawn for at least these reasons.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representatives at the telephone number listed below.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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